**Report Date:** 30 Jun 2014

# Summary Report for Individual Task
# 551-88L-2049
# Maintain Firefighting Equipment
# Status: Approved

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**Condition:** Given operational firefighting equipment aboard a vessel, at sea, at anchor or moored alongside a pier, day or night, under all sea and weather conditions, while wearing appropriate PPE, (i.e. hearing protection, Nitrile gloves, eye protection, etc.), with a lock out tag out kit, marine rail tool box.

**Standard:** The Soldier correctly maintains firefighting equipment aboard an Army vessel, IAW the appropriate Technical Manuals and local SOPs, without injury to self or others and without damage to equipment. The firefighting equipment was fully mission capable at task completion.

**Special Condition:** None

**Safety Risk:** Low

**MOPP 4:**

**Task Statements**

**Cue:** None

## DANGER

None

## WARNING

None

## CAUTION

None

**Remarks:** None

**Notes:** None

**Performance Steps**

1. Perform preventive maintenance of the Fire Stations.

a. Ensure all equipment is in place (where applicable).

(1) Two spanner wrenches.

(2) In-line foam proportioner.

(3) Fire fighting nozzles.

(4) Spare hose.

b. Inspect Y-gate and plug valve and lubricate as needed.

(1) Remove hose.

(2) Operate valve.

(3) Clean stem.

(4) Oil shaft.

(5) Apply silicone compound to threads.

c. Inspect fire fighting nozzle and lubricate as needed.

(1) Remove nozzle and gasket. Lubricate both sides as needed.

(2) Clean and inspect threads, they should be sharp and unmarked.

(3) Submerge nozzle in soapy water, open and shut several times, clean with soft bristle brush, dry with rags.

(4) Inspect nozzle for excessive corrosion/deterioration.

(5) Apply thin coat of silicone grease to operating shaft and nozzle ball shut off, operate nozzle to distribute grease and ensure smooth operation.

(6) Inspect gasket(s) for damage, deterioration and proper size.

(7) Apply light coat of silicone to threads.

(8) Reinstall gasket and nozzle.

d. Inspect and lubricate in-line proportioner (where applicable).

(1) Remove gasket and clean threads with soft bristle brush.

(2) Inspect gasket for damage and deterioration.

(3) Lubricate threads with silicone compound and reinstall gasket.

(4) Inspect pickup tube for abrasions and deterioration, check for strainer screen in crow’s foot of pickup tube.

(5) Remove pickup hose and ensure check valve operates, reinstall pickup hose.

e. Inspect, lubricate and re-rack fire hose.

(1) Remove fire hose and lay on deck.

(2) Remove gasket, clean threads and lubricate with silicone compound.

(3) Remove gasket, clean threads and lubricate with silicone compound.

(4) Inspect gasket for damage and deterioration.

(5) Reinstall gasket or renew gasket as required.

(6) Inspect hose for chafing, hose is unusable if:

(a) Inner jacket is chafed.

(b) Chafing of outer jacket encircles hose.

(7) Re-rake hose, ensuring hose is a minimum of 6 inches above the deck.

(8) Ensure fire hoses are not covered.

(9) Ensure hose is not connected to both sides of the Y-gate.

2. Perform annual pressure test of the Fire Hoses.

a. Preliminary steps.

(1) Check that replacement hoses are available prior to commencing procedure.

(2) Notify cognizant personnel prior to commencing maintenance.

(3) Move hoses to test location while leaving at least one hose rigged per fire hose station.

b. Inspect fire hoses.

(1) Inspect hose(s) for chafing.

(a) Discard hose(s) with inner jacket chafed.

(b) Discard hose(s) with chafing of outer jacket that encircles hose.

(2) Inspect hose gasket for cuts and other damage. Replace as needed.

(3) Connect hydro test pump to water supply or fire truck.

(4) Roll out and connect hose components for test.

(5) Draw a reference mark around the circumference at each end, where outer liner meets couplings, on all hoses with a Uni-Paint Marker, (refer to Figure 551-88L-2049_01).

Figure 551-88L-2049_01
Reference Mark

(6) Paint over old test date with white paint, (refer to Figure 551-88L-2049_02).

Figure 551-88L-2049_02
Test Date Stencil

c. Test fire hoses.

Note: Test no more than five hoses at once using the hydropump. Use a fire truck to test more than five hoses at a time.

(1) Connect one end of a hose component to a test water source. Install nozzle at the other end.

(2) Fill hose(s) with water.

(3) Bleed air by opening the nozzle.

(4) Disconnect hose(s) from firemain. Connect to discharge of test pump or fire truck.

(5) Pressurize hose(s) with test water.

(6) Bleed air from hose by opening nozzle.

(7) Close hose nozzle.

(8) Hold hose pressure at 250 PSI for five minutes.

(9) Inspect hoses for leaks.

(10) Discard any hose that, under pressure, takes unnatural set in chafed area.

(11) Inspect distance from reference marks to couplings. Discard any hose that shows any increase in the distance from the reference marks to couplings.

(12) Discard any hose that fails hydro test or chafing inspection.

(13) Release pressure from hose(s).

(14) Disconnect hoses from hydro test equipment. Lay out fire hoses to dry.
Note: Engraving test date on male end of coupling is acceptable. DO NOT STAMP COUPLING.

(15) Write new test date at the male end of the hose using a black Uni-Paint Marker and Stencil Set (refer to Figure 551-88L-2049_02).

(16) Re-stow hose(s) when thoroughly dried.

(17) Notify cognizant personnel upon completion of maintenance.

3. Perform functional flow test of all Fire Monitors, (refer to Figure 551-88L-2049_03).

a. Check the monitor for freedom of movement.

(1) Check that the monitor elevates and lower through its full range of motion.

(2) Check that the monitor rotates through its full range of motion.

(3) Check that the spray pattern lever and nozzle move through its full range of motion.

b. At each fire monitor, direct the fire monitor to place water away from the vessel using the directional control handle.

c. Align firemain valves to feed water to the fire monitors.

d. Energize both fire pumps.

e. OPEN the monitor cutoff valve.

f. Verify that the fire monitor operates without leaks.

g. CLOSE the monitor cutoff valve and repeat steps for remaining fire monitors.

h. When all monitors have been tested, return the equipment to the desired readiness condition.

i. Secure fire pumps and return the firemain system to the desired readiness condition.

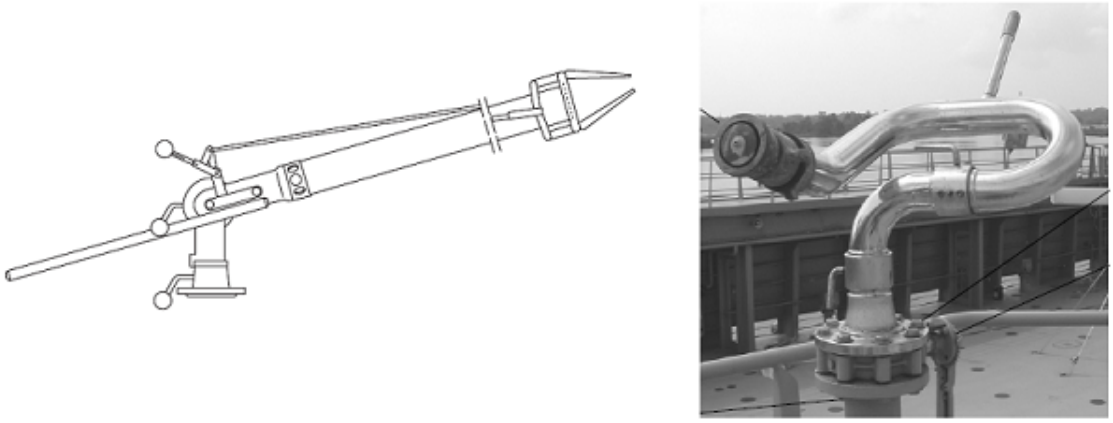


Figure 551-88L-2049_03
Fire Monitors

4. Perform preventive maintenance on CO2 Fire Extinguishers.

a. Perform monthly maintenance.

(1) Locate portable CO2 extinguishers.

(a) Ensure the area is safe for maintenance.

(b) Remove extinguisher from bracket.

(c) Lay extinguisher flat on the deck.

(2) Inspect the following for damage, corrosion and proper attachment (refer to figure 551-88L-2049_04).

(a) Cylinder Valve.

(b) Discharge Handle.

(c) Discharge Handle Locking pin.

(d) Discharge Handle D-ring (if equipped).

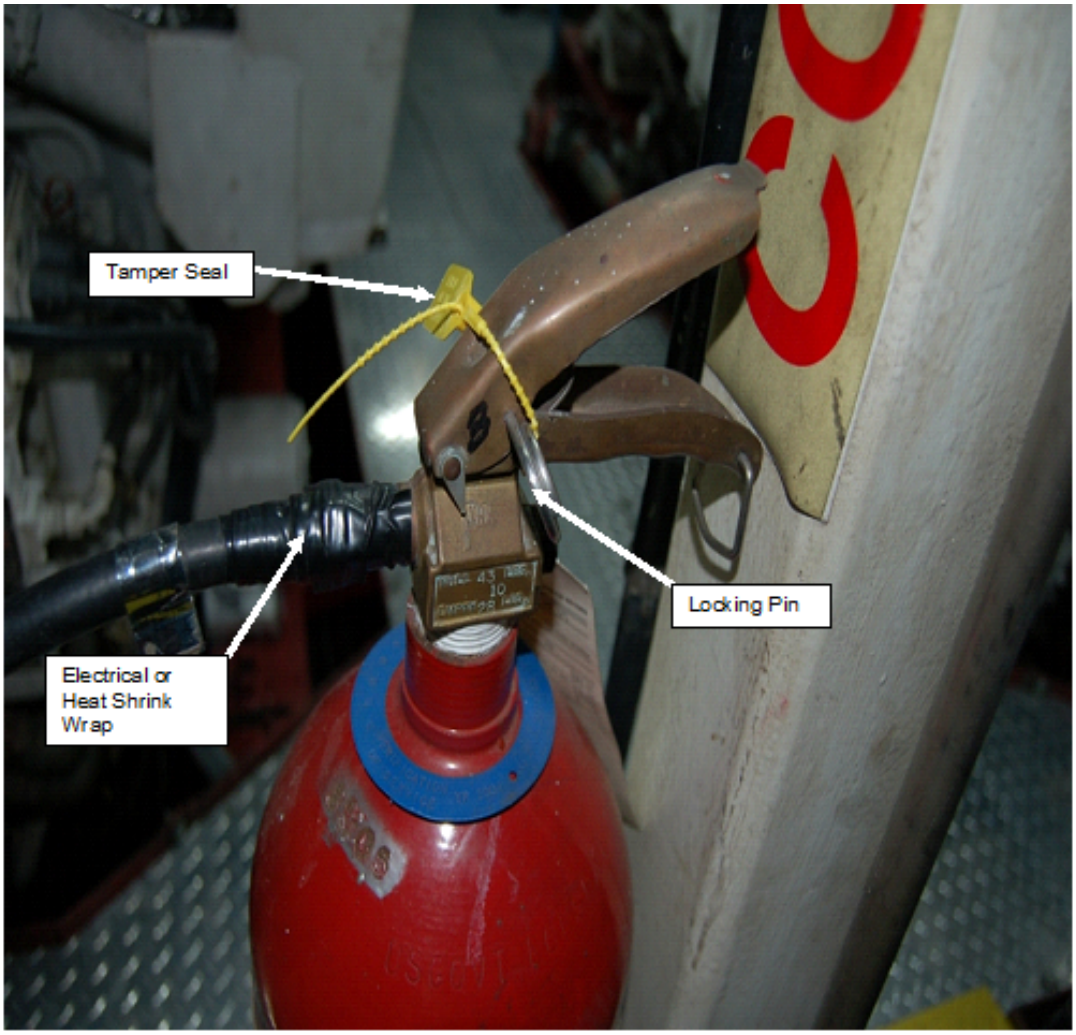



Figure 551-88L-2049_04
CO2 Extinguisher

(3) Inspect discharge hose for:

(a) Cuts.

(b) Breaks.

(c) Kinks.

(d) Dry-rot.

(e) Brittleness.

(f) Proper attachment.

(g) Metallic hose couplings at discharge horn and valve connections are wrapped with heat shrink or electrical tape.

(4) Inspect discharge horn and horn handle for:

(a) Damage.

(b) Deformation.

(c) Obstructions.

(d) Proper attachment.

(e) Proper Material.

(f) Horn shall be made of plastic or fiberglass.

(g) Horn handle shall be made of rubber or plastic.

(5) Inspect tamper proof seal.

(a) Ensure locking pin is in place.

(b) Ensure seal is thru ring on locking pin and pin cannot be removed without breaking seal.

(c) If seal is broken perform Weigh Inspection.

(6) Inspect cylinder for the following that would require extinguisher to be removed from service and/or hydrostatically tested:

(a) Corrosion.

_1_ Light corrosion must be treated immediately.

_2_ Heavy pitting type corrosion requires removal from service.

(b) Dents.

_1_ Depth may not exceed 1/10 of the greatest dimension of the entire dent.

_2_ In a weld area depth may not exceed ¼ of an inch (6mm).

(c) Gouges.

_1_ Depth may not exceed 10% of cylinder wall thickness.

_2_ If depth exceeds 10% of wall thickness, take extinguisher out of service.

(d) Deformities.

(e) Proper markings.

(7) Inspect Belly band and horn clamp assembly to ensure horn can be mounted securely when not in use. (refer to figure 551-88L-2049_05).

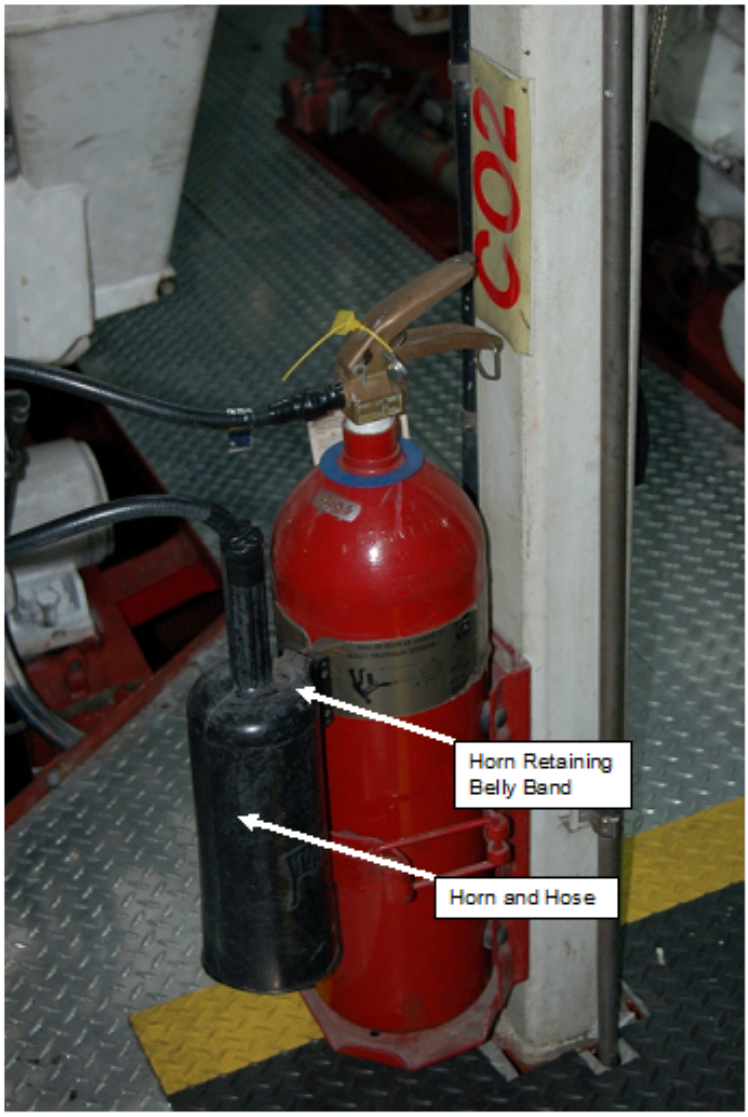



Figure 551-88L-2049_05
CO2 Extinguisher Belly Band

(8) Inspect mounting bracket for:

(a) Corrosion.

(b) Damage.

(c) Missing or damaged rubber stops.

(9) Inspect mounting hardware for tightness.

(10) Inspect latching mechanism for:

(a) Corrosion.

(b) Damage.

(c) Freedom of movement.

(d) Proper operation.

(e) Attaching hardware tightness.

(f) Missing or damaged rubber stops.

(11) Remount extinguisher into bracket and check that:

(a) Latching strap is tight.

(b) Extinguisher is secure and does not move.

(12) Fill out and sign attached inspection card.

b. Perform semi-annual maintenance.

(1) Locate each extinguisher performing the same inspection on each extinguisher.

(2) Ensure the area is safe for maintenance.

(3) Locate the tare (empty) weight of extinguisher on the neck of the extinguisher, (refer to Figure 551-88L-2049_06).

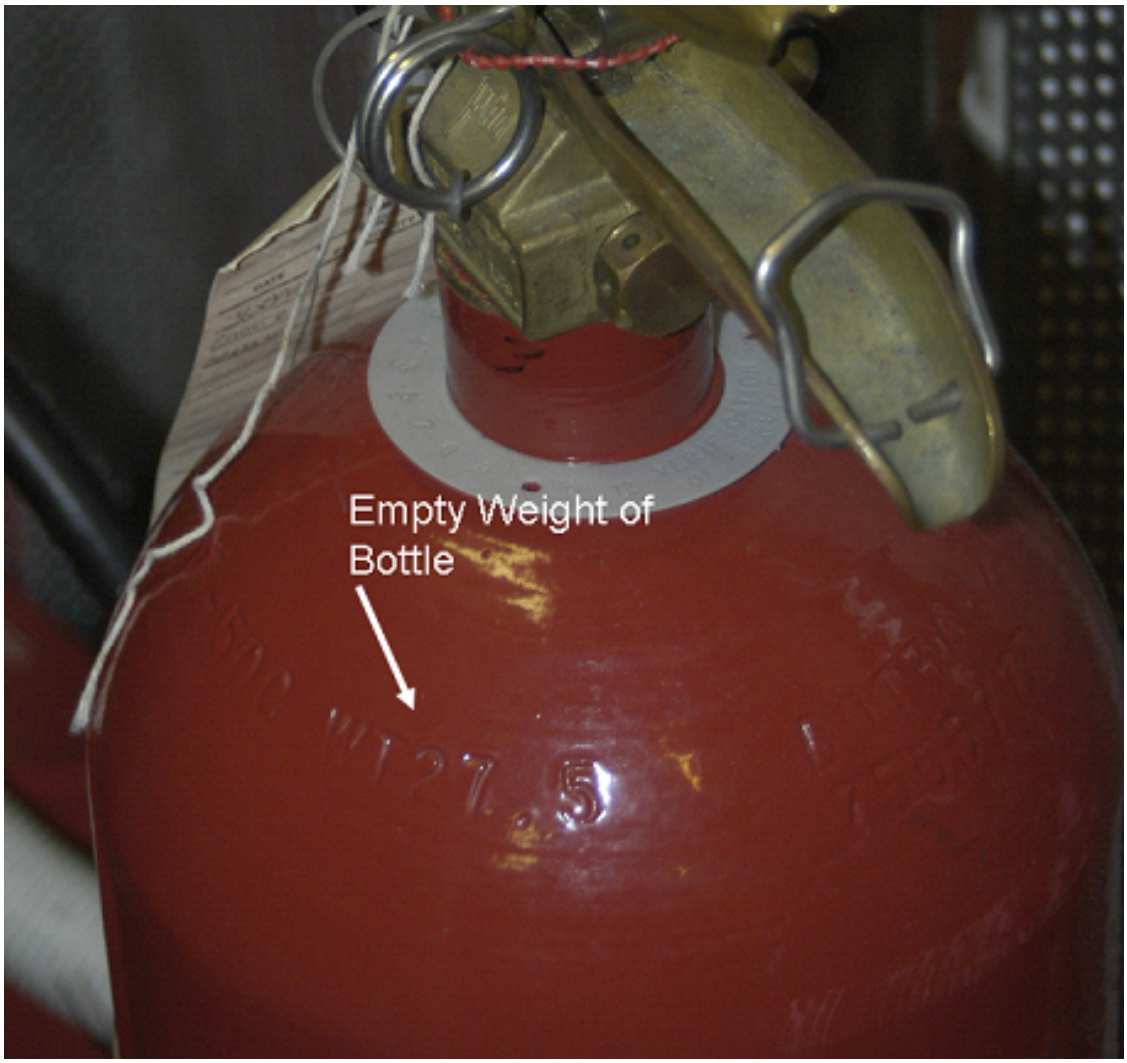


Figure 551-88L-2049_06
Tare Weight Stamp

(4) Weigh extinguisher using scale.

(a) Subtract the extinguisher's tare weight plus an additional two pounds for the weight of the horn and bellyband from the weight recorded on the scale.

(b) Referring to the acceptable weights in table 3, find the correct weight within the specified temperature range.

(c) If extinguisher exceeds maximum weight requirements, discharge extinguisher on the weather deck away from all personnel until the weight is within specified limits.

(d) If extinguisher is below minimum weight requirements, remove the extinguisher from service and replace it with a serviceable one. Send the unserviceable extinguisher to a recharging facility for recharging.

(5) Record weight on inspection tag.

c. Perform as required maintenance.

(1) Locate out of Hydro fire extinguishers.

(2) Ensure area is safe for maintenance.

(3) Check hydro date on neck of cylinder and remove out of date extinguishers from their stations, replacing each with a serviceable spare, (refer to Figure 551-88L-2049_07).

Figure 551-88L-2049_07
Hydro Test Date Stamp

(4) Contact the appropriate local maintenance facility, making arrangements for the servicing of each extinguisher.

(5) Remove hose and horn from each extinguisher, also remove each horn retaining belly band. Store horn/hose and belly band in a secure location for reuse when extinguishers return from service.

(6) Deliver and pick up extinguishers from local maintenance facility.

(7) Upon the return of extinguishers from local maintenance facility monthly inspection items 1 and 2 must be completed for each extinguisher hydrostatically tested prior to placing extinguisher back on station.

(8) Record date and weight on extinguisher's inspection card.

(9) Reinstall horn, hose, and belly band onto each extinguisher.

Note: When using heat shrink as a protector for metal hose connections at valve and horn, ensure to slide the three inch length of heat shrink on the hose ends prior to connecting hose to horn and valve.

(10) Wrap a length of electrical tape or heat shrink around metal hose connection at horn and valve, (refer to Figure 551-88L-2049_08).

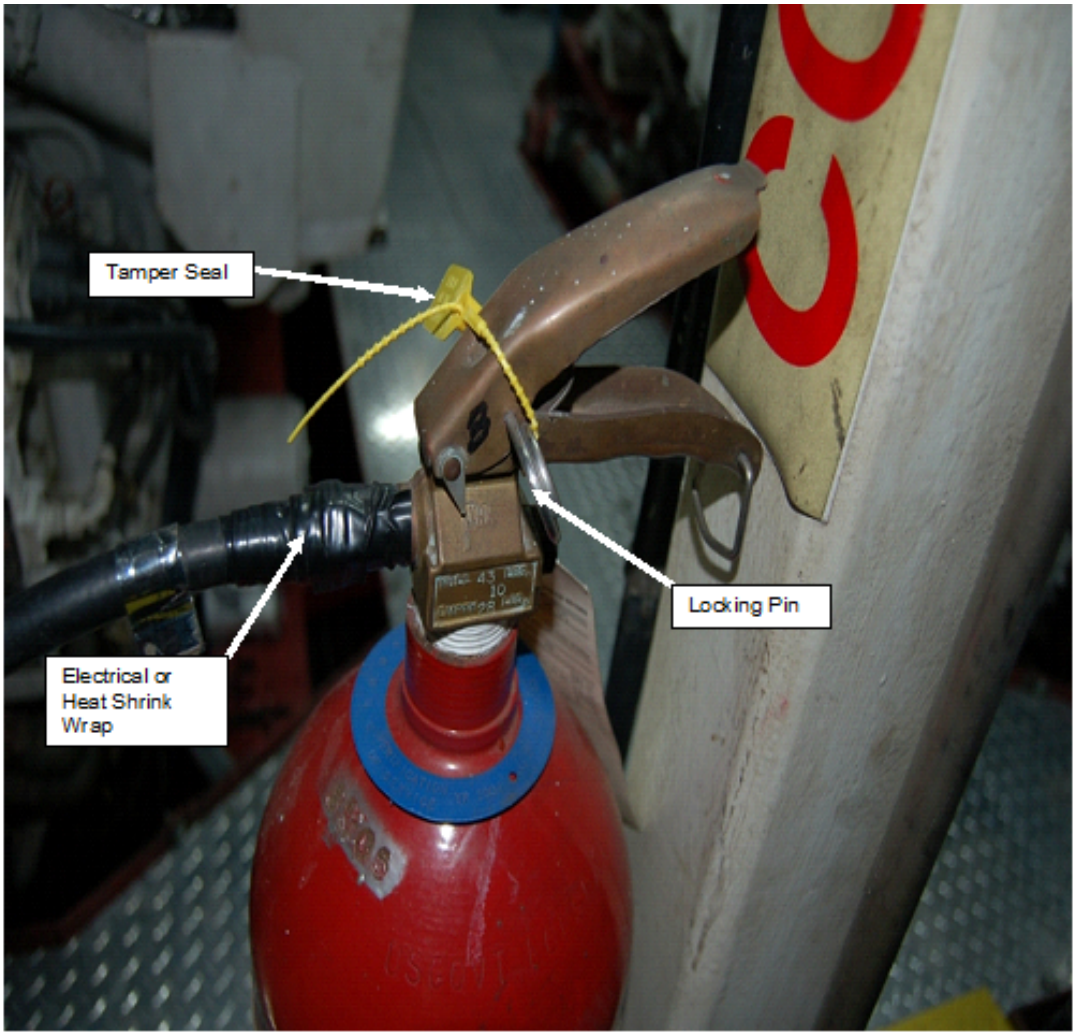



Figure 551-88L-2049_08
Hose Connection

5. Perform preventive maintenance on PKP Extinguishers.

Note: Opening of the canister must be done in a low humidity area to prevent moisture from caking the powder.More frequent performance of this maintenance may be required, if conditions warrant, i.e heavy seas, etc.

a. Perform quarterly maintenance.

(1) Inspect portable PKP extinguisher (cartridge type).

(a) Remove extinguisher from bracket.

(b) Remove cartridge guard and slowly unscrew cartridge.

(c) Inspect discharge hose for breaks, cuts and deterioration.

(d) Inspect discharge nozzle for ease of operation and for corrosion.

Note: There will be a large amount of the powder carried away when this procedure is followed. Goggles and a filter respirator should be used when working with airborne PKP.

(e) Inspect nozzle for obstructions.

(f) Inspect tamper seal.

_1_ If broken or missing, the extinguisher should be removed to a safe area, inverted, and the nozzle trigger depressed to determine if the extinguisher has been accidentally charged.

_2_ If the extinguisher has been charged, continue to discharge the carbon dioxide propellant until empty.

_3_ Once the cylinder has been discharged, service the extinguisher.

_4_ If the extinguisher has not been charged with the carbon dioxide propellant, continue with this inspection as outlined below.

Note: CO2 cartridge has left hand threads.

(g) Remove CO2 cartridge and inspect copper seal for damage.

(h) If damaged, renew cartridge, but do not reinstall cartridge at this time.

(i) Inspect cylinder for dents and corrosion.

(j) Invert the extinguisher, with CO2 cartridge removed, and shock loosen the powder by tapping the canister with a rubber mallet.

(k) Remove canister top and inspect the powder for fluid movement and correct fill level (approximately to the base of the neck).

(l) Brush cap and canister threads with a stiff sash tool (do not use a wire brush).

_1_ Inspect the cap vent hole and groove for obstruction.

_2_ Replace cap and tighten only hand tight.

(m) Install CO2 cartridge and cover.

(n) Ensure locking pin faces inward and attach tamper proof seal.

(2) Record date of service on attached inspection card.

b. Perform annual maintenance.

(1) Annual maintenance involving discharge of the extinguisher should be conducted on 20% of interior extinguishers and all exterior extinguishers.

(2) Ensure adequate spare CO2 cartridges, PKP, and tamper seals are available before conducting maintenance.

(3) Notify cognizant personnel prior to commencing maintenance.

(4) Select and remove extinguishers to be tested.

(5) Select an appropriate open atmosphere to conduct maintenance.

Note: If feasible, conduct proper fire extinguisher usage training while annual maintenance is being conducted.

(6) Perform a service test.

(a) Operate the fire extinguisher according to the manufacturer's instructions.

(b) Operate the fire extinguisher and discharge the agent.

(c) Ensure that the fire extinguisher operates properly, and note any operating deficiencies.

(d) Stop and start discharging the agent to ensure that the nozzle works properly.

(7) Perform maintenance.

(a) Expel remaining dry-chemical agents.

(b) Bleed off residual pressure, if applicable.

**WARNING**

BEFORE YOU REMOVE THE CAP AND REFILL THE FIRE EXTINGUISHER WITH DRYCHEMICAL AGENT, INVERT THE FIRE EXTINGUISHER AND BLEED OFF REMAINING PRESSURE. FAILURE TO COMPLY MAY CAUSE PERSONAL INJURY.

(c) Examine the exterior of the shell for foreign material.

(d) Unscrew the cap, and inspect the interior of the fire extinguisher for hardened, caked, or packed dry chemicals.

(e) Inspect the gasket for cracks and brittleness.

(f) Check the hose and nozzle for obstructions.

(g) Perform a hydrostatic test if required.

**DANGER**

ENSURE THAT THE CORRECT DRY-CHEMICAL AGENT IS USED TO REFILL THE FIRE EXTINGUISHER. MULTIPURPOSE, DRY-CHEMICAL FIRE EXTINGUISHERS MUST BE FILLED WITH A MULTIPURPOSE, AMMONIUM PHOSPHATE-BASED AGENT; AND NORMAL, DRY-CHEMICAL FIRE EXTINGUISHERS MUST BE FILLED WITH SODIUM BICARBONATE-BASED AGENTS. DO NOT MIX THE AGENTS. FAILURE TO COMPLY MAY CAUSE PERMANENT INJURY OR DEATH. DO NOT REFILL DRY-CHEMICAL FIRE EXTINGUISHERS WITH DRY-POWDER AGENTS. FAILURE TO COMPLY MAY CAUSE PERMANENT INJURY OR DEATH.

(h) Refill the fire extinguisher with the correct amount of agent.

(i) Replace the cap, and seal the fire extinguisher.

(j) Attach a seal through the hole in the handle to prevent accidental discharge.

(k) Use a scale to weigh the CO2 cartridge while it is removed.

_1_ Proper weights are as follow;

_a_ Model 10 (9 lb) - 2 1/2 oz.

_b_ Model 20 (18 lb) – 5 1/4 oz.

_c_ Model 30 (30 lb) – 8 1/2 oz.

_2_ Full weight minus safety cap is stamped on cartridge.

_3_ Do not use cartridge if weight is 1/2 oz. less than weight stamped on the cartridge.

(l) Replace the gas cartridge.

Note: Freezing temperatures can affect carbon dioxide cartridge pressure. Replace the carbon dioxide cartridge with a nitrogen cartridge on fire extinguishers that will be subjected to freezing temperatures.

(m) Attach the seal to the fire extinguisher puncture plate.

(n) Reattach the hose assembly and nozzle.

(o) Record date of service on attached inspection card.

(8) Perform hydrostatic test of the PKP extinguisher.

(a) All PKP extinguishers must be hydrostatically tested every twelve years or if the strength of the shell is in question.

(b) Make arrangements with a commercial facility to hydrostatically test extinguishers.

Note: If spares are unavailable notify the Chief Engineer of which stations are missing due to testing.

(c) Remove extinguishers with expired hydro dates from stations and replace with spares.

(d) Remove CO2 cartridge and PKP from cylinder.

(e) Deliver and pick up extinguishers from testing facility.

(f) Ensure a hydrostatic test label is affixed to the extinguisher.

(g) Recharge the extinguishers with PKP.

(h) Reinstall extinguishers on the stations.

6. Perform preventive maintenance on Aqueous Film Forming Foam (AFFF) Fire Extinguishers.

a. Perform monthly maintenance.

(1) Check the AFFF fire extinguisher for missing or broken antipilferage seal, (refer to Figure 551-88L-2049_09).

(a) Check weight and pressure in extinguisher, if seal is broken or missing.

(b) Service extinguisher as required.

(2) Check the AFFF fire extinguisher pressure gauge to ensure that it reads in the green band, service extinguisher, if gauge reads in the red band.

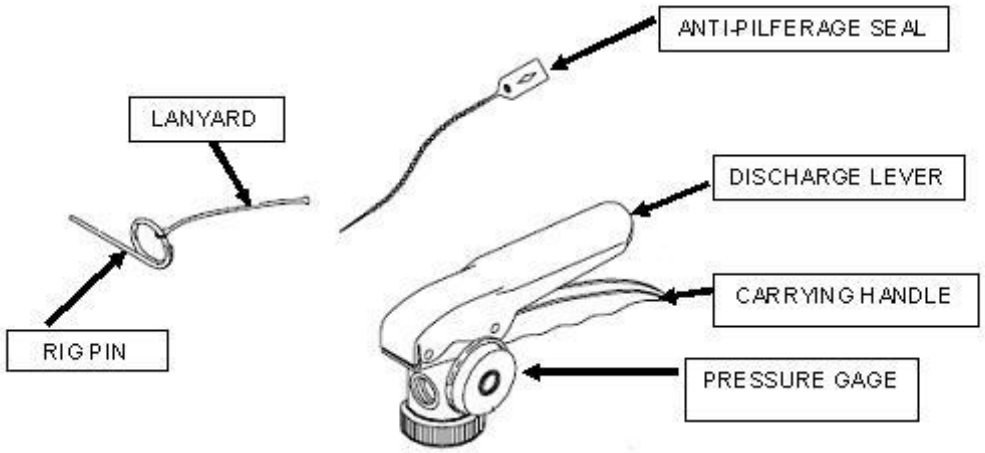



Figure 551-88L-2049_09
AFFF Extinguisher Discharge Valve Assembly

(3) Check the hydrostatic test date.

(a) Remove extinguisher from service, if test date is past five years.

(b) Replace with another portable AFFF extinguisher.

(c) Perform this maintenance on new AFFF extinguisher.

(d) Send out expired extinguisher to a DOT certified facility for hydrostatic testing.

(4) Check the AFFF extinguisher last charge date on inspection tag. Service AFFF extinguisher, if last charge date exceeds three years.

(5) Check AFFF extinguisher inspection tag.

(a) Remove tag from plastic envelope.

(b) Install new tag if all blocks are filled.

(c) Record initials and date accomplished on the AFFF extinguisher inspection tag.

(d) Inspect plastic envelope for tears and clarity.

(6) Return extinguisher that passes inspection to proper location.

b. Perform semi-annual maintenance.

(1) Clean extinguisher with the general purpose detergent to remove dirt, grease or foreign material.

(2) Ensure that the instruction nameplate is securely fastened and legible.

(3) Inspect the cylinder for corrosion, abrasion, dents or damage to welds.

(a) Remove extinguisher from service, if any damage is found.

(b) Replace with another portable AFFF extinguisher.

(c) Perform this maintenance on new AFFF extinguisher.

(d) Send out damaged extinguisher to a DOT certified facility for hydrostatic testing.

(4) Inspect the foot stand (base) for cracks or other damage. Replace as necessary.

(5) Inspect extinguisher valve assembly.

(a) Visually inspect the pressure gauge for damage.

_1_ Replace pressure gauge if any damage is found.

_2_ Depressurize extinguisher.

_3_ Recharge extinguisher.

(b) Inspect the ring pin for the following:

_1_ Bent.

_2_ Freedom of movement.

_3_ Replace pin if any damage is noted.

_4_ Install new antipilferage seal through ring.

(c) Inspect discharge lever for dirt or corrosion that might impair freedom of movement.

_1_ Clean discharge lever with general purpose detergent if dirt is present.

_2_ Depressurize extinguisher, if corrosion impairs freedom of movement.

_3_ Replace discharge lever.

_4_ Recharge extinguisher.

(d) Inspect carrying handle for damage or missing rivets. Replace if rivets are missing.

(e) Inspect hose assembly for damage.

_1_ Remove hose assembly from the fire extinguisher, if damage is found.

_2_ Discard o-ring and hose assembly.

(f) Inspect the valve assembly for corrosion or damage to the hose thread connection.

_1_ Depressurize extinguisher, if any abnormal condition is noted.

_2_ Replace valve assembly.

_3_ Recharge extinguisher.

(g) To install a new hose assembly.

_1_ Lubricate new o-ring with silicone compound.

_2_ Install new o-ring onto hose assembly.
Note: There is no torque value required, do not over tighten.

_3_ Install hose assembly into the valve assembly.

(h) Inspect inspection tag.

_1_ Remove inspection tag from plastic envelope.

_2_ Replace with new inspection tag if all blocks are filled.

_3_ Record initials and date accomplished onto the inspection tag.

_4_ Inspect plastic envelope for tears and clarity. Replace envelope if discrepancies are found.

_5_ Install inspection tag into plastic envelope.

(i) Return extinguisher that passes inspection to proper location.

c. Perform as required maintenance.

(1) Depressurize AFFF extinguisher.

(a) Invert AFFF extinguisher.

(b) Point nozzle in safe direction.

(c) Relieve air pressure by depressing valve lever until all pressure is completely relieved.

(2) Inspect extinguisher, (refer to Figure 551-88L-2049_10).

(3) Unscrew extinguisher discharge valve from cylinder.

(4) Empty remaining old AFFF solution into closeable container for later disposal.

(5) Inspect valve assembly.

(a) Unscrew downtube from valve assembly.

_1_ Inspect downtube for damage.

_2_ Replace downtube if damage is found.

(b) Remove and discard spring.

(c) Remove valve stem assembly.

_1_ Inspect valve stem assembly for damage.

_2_ Replace valve stem assembly if damage is found.

(d) Remove and discard collar o-ring from the valve.

(e) Remove and discard o-ring from the downtube.

(f) Remove plastic fill tube from the cylinder.

_1_ Inspect fill tube for damage.

_2_ Replace fill tube if damage is found.

(g) Remove and discard small o-ring from valve stem assembly.

(h) Rinse all parts thoroughly with clean water and wipe parts dry.

(i) Blow out valve with Low Pressure (LP) air.

(6) Rinse inside of cylinder with clean water.

(7) Visually inspect inside of cylinder for damage or corrosion. Replace extinguisher if damage or corrosion is found.

(8) Install fill tube into the cylinder neck firmly.

(9) Fill the cylinder with approximately 288 ounces (2-1/4 Gallons) of clean freshwater.

(10) Add slowly to the cylinder, the appropriate amount of AFFF concentrate for AFFF concentrate percentage being used, (Refer to Table 1).

Note: Adding water too quickly to AFFF solution can cause overflow of foam.

| Type of AFFF Concentrate | Amount of Water | Amount of Concentrate |
|---|---|---|
| 3% Concentrate | 310 Ounces (2 Gallons, 1 Quart and 22 Ounces) | 10 Ounces (1 Cup, 2 Ounces) |
| 6% Concentrate | 300 Ounces (2 Gallons, 1 Quart and 12 Ounces) | 20 Ounces (2 Cups, 4 Ounces) |

Table 1
AFFF/Water Solution Ratio

(11) Add additional water very slowly, until liquid level is at the bottom of the fill tube.

(12) Coat the new collar o-ring and new small o-ring from valve stem and the new downtube o-ring with silicone compound.

(13) Assemble valve parts.

(a) Install new small o-ring on valve stem assembly.

(b) Install new o-ring on the downtube.

(c) Install new collar o-ring on the valve assembly.

(d) Install valve stem assembly into valve assembly.

(e) Install new spring onto valve stem assembly.

(f) Screw downtube into valve assembly.

(14) Install valve assembly onto the cylinder and properly align.

(15) Tighten by hand the valve assembly onto the cylinder.

(16) Pick up and shake the extinguisher to ensure a thorough mix of the foam solution.

(17) Install the pressurizing adapter into the hose opening in the valve assembly.

(18) Set low pressure air regulator to maximum of 125 PSI.

(19) Attach LP air line to the adapter.

(20) Squeeze valve lever to pressurize the extinguisher to until gauge reads 100 PSI.

(21) Release valve lever and remove LP air line from the adapter.

(22) Remove the adapter.

(a) Install hose assembly.

(b) Lubricate new hose o-ring with silicone compound.

(c) Install new o-ring onto hose assembly.
Note: There is no torque value required, do not over tighten.

(d) Install hose assembly into the valve assembly.

(23) Weigh assembled extinguisher with scale.

(24) Confirm that the total weight is within the allowable tolerances indicated in the maintenance section on the extinguisher nameplate.

(25) Replace inspection tag.

(a) Remove old tag from plastic envelope.

_1_ Discard old tag.

_2_ Replace plastic envelope if deteriorated.

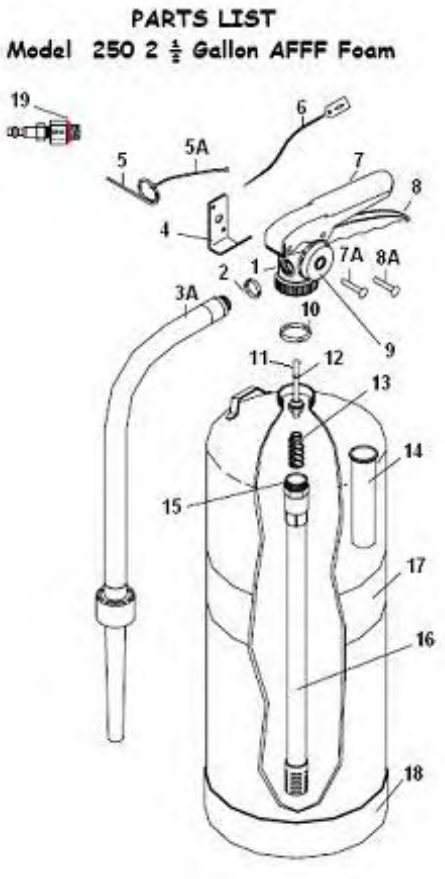
(b) Record weight, initials, date accomplished on the new inspection tag.

(c) Install new inspection tag into plastic envelope.

(26) Install new seal.

(27) Return extinguisher that passes inspection to proper location.

(28) Dispose of AFFF IAW local, state and federal regulations.




| Item No. | Part No. | Description |
|---|---|---|
| 1 | 14345 | Valve Asy. - 250, 252, 254 |
| 2 | 06978 | Hose Gasket (o-ring) |
| 3A | 07000 | Hose & Aspirated Noz. Asy - 250 |
| 4 | 01007 | Wall Bracket |
| 5 | 00160 | Ring Pin, Stainless Steel |
| 5A | 00532 | Chain (Nylon) for Ring Pin |
| 6 | 01387 | Lock Wire Seal (Yellow) |
| 7 | 07762 | Lever & Rivet |
| 7A | 01563 | Rivet Only for Lever |
| 8 | 09020 | Handle & Rivets |
| 8A | 01564 | Rivet Only for Handle (2 required) |
| 9 | 06479 | 100 PSI Gauge (SS Tube) |
| 10 | 05240 | Collar O-Ring |
| 11 | 06093 | Valve Stem Assembly |
| 12 | 05243 | Valve Stem O-Ring |
| 13 | 00383 | Spring |
| 14 | 02595 | Fill Tube |
| 15 | 05690 | Downtube O-Ring |
| 16 | 02209 | Downtube/Retainer Asy - 250 |
| 17 | | Nameplate (label) non-UL Specify Extinguisher Model No. |
| 18 | 03776 | Foot Stand w/Post (Black) - 250 |
| 19 | 02141 | Pressurizing Adapter |

Figure 551-88L-2049_10
AFFF Extinguisher Assembly

7. Perform preventive maintenance of the Fire Fighting Ensemble (FFE).

a. Perform annual maintenance.

(1) Inspect the Fire Protective Garment (FPG).

(a) Separate the layers of the garment elements if able.

(b) Inspect all layers for soiling or contamination.

(c) Consult the manufacturer’s technical manual to determine how elements will be cleaned.

_1_ Conduct routine wash of the layers if soiled.

_2_ Send FPG elements out to local cleaner for commercial cleaning, if contaminated.

(d) Inspect all layers for the following types of physical damage:

_1_ Rips, tears, cuts, and abrasions.

_2_ Damaged or missing hardware.

_3_ Thermal damage, (charring, burn holes, melting, or discoloration of any layer).

_4_ Replace the FPG in the appropriate size if damage is unrepairable.

(e) Inspect for loss of moisture barrier integrity caused by the following:

_1_ Rips, tears, cuts, or abrasions.

_2_ Discoloration.

_3_ Thermal damage.

_4_ Replace FPG in the appropriate size if damaged.

(f) Inspect for loss of seam integrity and broken or missing stitches.

(g) Inspect for the following types of loss of material physical integrity (e.g., ultraviolet (UV) or chemical degradation):

_1_ Evidenced by discoloration.

_2_ Significant changes in material texture.

_3_ Loss of material strength.

_4_ Loss of liner material.

_5_ Shifting of liner material.

_6_ Replace the FPG, in the appropriate size, if damage is unrepairable.

(h) Inspect for the following types of loss of integrity or damage:

_1_ Wristlets elasticity, stretching, runs, cuts, or burn holes.

_2_ Reflective trim integrity, attachment to garment, reflectivity, or damage.

_3_ Label integrity and legibility.

_4_ Hook and loop functionality.

_5_ Liner attachment systems.

_6_ Closure system functionality.

_7_ Replace the FPG, in the appropriate size, if damage is unrepairable.

(i) Ensure that the correct assembly and size compatibility of shell and liner.

(2) Inspect the fireman hood.

(a) Inspect each hood for soiling or contamination. Wash the hoods if soiled or contaminated.

(b) Inspect hoods for the following types of physical damage:

_1_ Shrinkage.

_2_ Loss of material elasticity or stretching out of shape.

_3_ Loss of seam integrity or broken or missing stitches.

_4_ Loss of face opening adjustment.

_5_ Rips, tears, cuts, and abrasions.

_6_ Thermal damage, (charring, burn holes, melting, or discoloration of any layer).

(c) Replace the fireman hood if damaged.

(3) Inspect the fireman's helmet.

(a) Inspect each helmet for soiling or contamination. Wash the helmets if soiled or contaminated.

(b) Inspect the helmet for the following types of physical damage to the shell:

_1_ Cracks, dents, and abrasions.

_2_ Thermal damage to the shell, (bubbling, soft spots, warping, or discoloration).

(c) Inspect for the following types of physical damage to the ear flaps:

_1_ Rips, tears, and cuts.

_2_ Thermal damage, (charring, burn holes, melting, or discoloration).

_3_ Replace ear and neck protector if damaged.

(d) Inspect adjustable headband for damage and functionality. Replace adjustable headband if damaged or not functioning.

(e) Inspect for damaged or missing components of the suspension and retention systems.

_1_ Check functionality of the suspension and retention systems.

_2_ Replace suspension assembly if damaged.

(f) Inspect for damage of the chin strap. Replace chin strap if damaged.

(g) Inspect for damaged or missing components of the faceshield system.

_1_ Inspect for discoloration or scratches to the faceshield lens limiting visibility. Replace faceshield if damaged.

_2_ Check functionality of the faceshield mounting system. Replace mounting system if damaged.

(h) Inspect for damage to the impact cap.

(i) Inspect for damaged or missing reflective trim. Replace luminous tape if damaged.

(j) Replace fireman’s helmet if damage is unrepairable.

(4) Inspect steamblock glove.

(a) Inspect each glove for soiling or contamination. Wash the gloves if soiled or contaminated.

(b) Inspect for the following types of physical damage to the gloves:

_1_ Rips, tears, and cuts.

_2_ Thermal damage, (charring, burn holes, melting or discoloration).

_3_ Inverted liner.

_4_ Loss of seam integrity or broken or missing stitches.

_5_ Shrinkage.

_6_ Loss of flexibility.

_7_ Loss of elasticity and shape in wristlets.

_8_ Replace the steamblock gloves in the appropriate size damage is unrepairable.

(5) Inspect firemen’s boot.

(a) Inspect each boot for soiling or contamination. Wash the boot if soiled or contaminated.

(b) Inspect for the following types of physical damage to the boots:

_1_ Cuts, tears, punctures, cracking, or splitting.

_2_ Thermal damage, (charring, burn holes, melting or discoloration of any layer).

_3_ Exposed or deformed steel toe, steel midsole, or shank.

_4_ Loss of seam integrity, delamination, or broken or missing stitches.

_5_ Loss of water resistance.

_6_ Excessive tread wear.

(c) Inspect for the condition of lining for the following:

_1_ Tears.

_2_ Excessive wear.

_3_ Separation from outer layer.

_4_ Heel counter failure.

(d) Replace firemen's boots in the appropriate size if damaged.

b. Perform as required maintenance.

(1) Wash Fire Protective Garment (FPG).

(a) Separate FPG liner system from the shell element to avoid cross contamination.

(b) Wash FPG shell.

_1_ Rinse off debris and dirt from FPG elements using potable water.

_2_ Scrub gently with soft bristle brush to remove debris.

## CAUTION

NEVER USE CHLORINE BLEACH, CHLORINATED SOLVENTS, ACTIVE INGREDIENT CLEANING AGENTS, OR SOLVENTS ON FIREFIGHTER ENSEMBLE ELEMENTS. CHLORINE BLEACH WILL SIGNIFICANTLY COMPROMISE THE PROTECTION AFFORDED BY TEXTILE AND FILM MATERIALS UTILIZED IN THE CONSTRUCTION OF THIS EQUIPMENT.

(c) Pre-treat mold or mildew areas with color safe laundry bleach, such as Clorox 2.

(d) Wash FPG shell by hand.

_1_ Fill utility sink or utility pail with potable water not to exceed 105° F.

## CAUTION

DETERGENTS WITH A PH RANGE OF NOT LESS THAN 6.0 PH AND NOT GREATER THAN 10.5 PH AS INDICATED ON THE PRODUCT MSDS OR CONTAINER SHALL BE USED. USE OF DETERGENT OUTSIDE THIS RANGE WILL SIGNIFICANTLY COMPROMISE THE PROTECTION AFFORDED BY TEXTILE AND COATING MATERIALS UTILIZED IN THE CONSTRUCTION OF THIS EQUIPMENT.

_2_ Add general purpose detergent to water.

_3_ Scrub soiled areas gently with soft bristle brush.

_4_ Rinse thoroughly with clean potable water.

_5_ Inspect thoroughly for cleanliness.

(e) Rewash FPG shell if soil is still evident.

_1_ Send FPG shell to a local Independent Service Provider (ISP) for commercial cleaning, if soiled after second wash.

_2_ DO NOT dry clean the FPG.

(f) Air dry elements completely in well ventilated area before storing.

(2) Wash the FPG liner system.

Note: Units shall only use front loading washing machines to clean FPG liner systems. Units without this type of machine can either take FPG liners to local laundromat with correct type of machines or send out to an Independent Service Provider.

(a) Pre-treat heavily soiled or mildew spotted areas with color safe laundry bleach, such as Clorox 2.

(b) Ensure all closures, including pocket closures, hooks and loops, and snaps are fastened.

(c) Turn liner system inside out so the moisture barrier is on the inside for both machine washing and machine drying.

(d) Set water temperature to “WARM”, (not to exceed 105° F).

## CAUTION

DETERGENTS WITH A PH RANGE OF NOT LESS THAN 6.0 PH AND NOT GREATER THAN 10.5 PH AS INDICATED ON THE PRODUCT MSDS OR CONTAINER SHALL BE USED. USE OF DETERGENT OUTSIDE THIS RANGE WILL SIGNIFICANTLY COMPROMISE THE PROTECTION AFFORDED BY TEXTILE AND COATING MATERIALS UTILIZED IN THE CONSTRUCTION OF THIS EQUIPMENT.

(e) Add laundry detergent according to label directions.

(f) Set washing machine to “NORMAL” cycle.

(g) Wash liner.

_1_ Wash liner a second complete cycle without detergent if the machine does not automatically have a second rinse.

_2_ Ensure all laundry detergent has been rinsed from liner.

(h) Inspect the liner for cleanliness.

(i) Rewash FPG liner if soil is still evident.

(j) Send FPG liner to a local ISP for commercial cleaning if soiled after second routine wash.

(k) Rinse machine of dirt/grease buildup by running without a laundry load through a complete cycle with detergent and filled to the maximum level with water at a temperature of 120° to 125° F (HOT).

(l) Air dry elements completely in well ventilated area before reassembly and storing.

(3) Wash fireman helmet.

(a) Remove inner crown system from the helmet shell.

(b) Add general purpose detergent to water.

(c) Scrub soiled areas gently with soft bristle brush.

(d) Rinse thoroughly with clean potable water.

(e) Inspect thoroughly for cleanliness.

(4) Wash steamblock gloves.

(a) Add general purpose detergent to water.

(b) Scrub soiled areas gently with soft bristle brush.

(c) Rinse thoroughly with clean potable water.

(d) Inspect thoroughly for cleanliness.

(5) Wash fireman boots.

(a) Add general purpose detergent to water.

(b) Scrub soiled areas gently with soft bristle brush.

(c) Rinse thoroughly with clean potable water.

(d) Inspect thoroughly for cleanliness.

(6) Wash fireman hood.

(a) Scrub soiled areas gently with soft bristle brush.

(b) Rinse thoroughly with clean potable water.

(c) Inspect thoroughly for cleanliness.

8. Perform preventive maintenance on Self Contained Breathing Apparatus (SCBA).

a. Perform monthly maintenance.

(1) Check the SCBA remote pressure indicator, (refer to Figure 551-88L-2049_11).

(a) Verify that the glass on the remote pressure indicator is not cracked or broken.

(b) Verify that the needle is present and not bent.

(c) Verify that the high-pressure hose is securely attached to the remote pressure indicator.

(d) The remote pressure indicator is not ready or available for use if:

_1_ The glass on the remote pressure indicator is cracked or broken.

_2_ The needle on the remote pressure indicator is missing or bent.

_3_ The high-pressure hose is not securely attached to the remote pressure indicator.

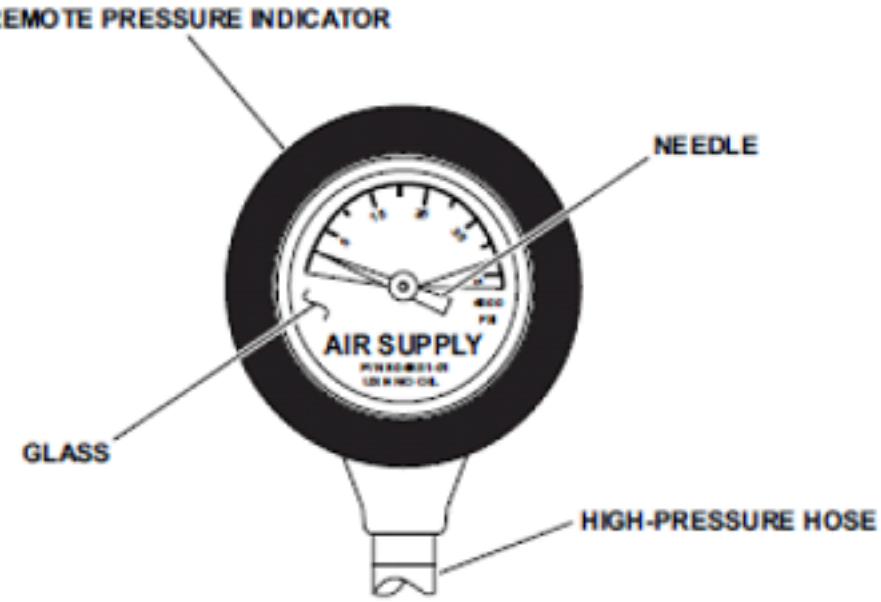



Figure 551-88L-2049_11
Remote Pressure Indicator

(2) Check the cylinder assembly, (refer to Figure 551-8ST-1004_12).

(a) Inspect cylinder label and decals to ensure that:

_1_ All information is legible.

_2_ The cylinder is within the hydrostatic test date.

(b) Inspect the cylinder assembly exterior surface for cuts, gouges, abrasions, dents, corrosion, and discoloring, or damage that has caused the fiber overwrap to display exposed, broken, or loose fibers or has become separated, unraveled, or loose.

(c) Inspect the cylinder valve for external damage, thread damage, and proper handwheel operation.

(d) Verify that the elastomeric bumper is present and intact.

(e) Inspect the burst disc to ensure that it is not ruptured.

(f) Inspect the hanger plate to ensure it is not bent or broken. Ensure it is firmly secured with the locking tab and that the cylinder band clamp is tightened to properly secure the installed cylinder.

(g) Inspect the air cylinder pressure by performing the following steps:

_1_ Turn the handwheel on the cylinder valve to the fully open position.

_2_ Verify that the remote pressure indicator displays a minimum of 4000 PSI.

_3_ Verify that the dual reading pressure indicator on the cylinder assembly displays a minimum of 4000 PSI.

(h) The cylinder assembly is not ready/available if:

_1_ The cylinder label and decals are not legible or the cylinder is not within the hydrostatic test date.

_2_ The cylinder assembly exterior surface has level 2 or level 3 damage as defined in Appendix C of TM 10-4310-503-13&P.

_3_ The cylinder valve has damaged threads that prevent proper handwheel operation.

_4_ The elastomeric bumper is missing, cracked, or broken. The burst disc is ruptured.

_5_ The hanger plate is bent or broken.

_6_ Air cylinder pressure is less than 4000 PSI on the dual reading pressure indicator or the remote pressure indicator.

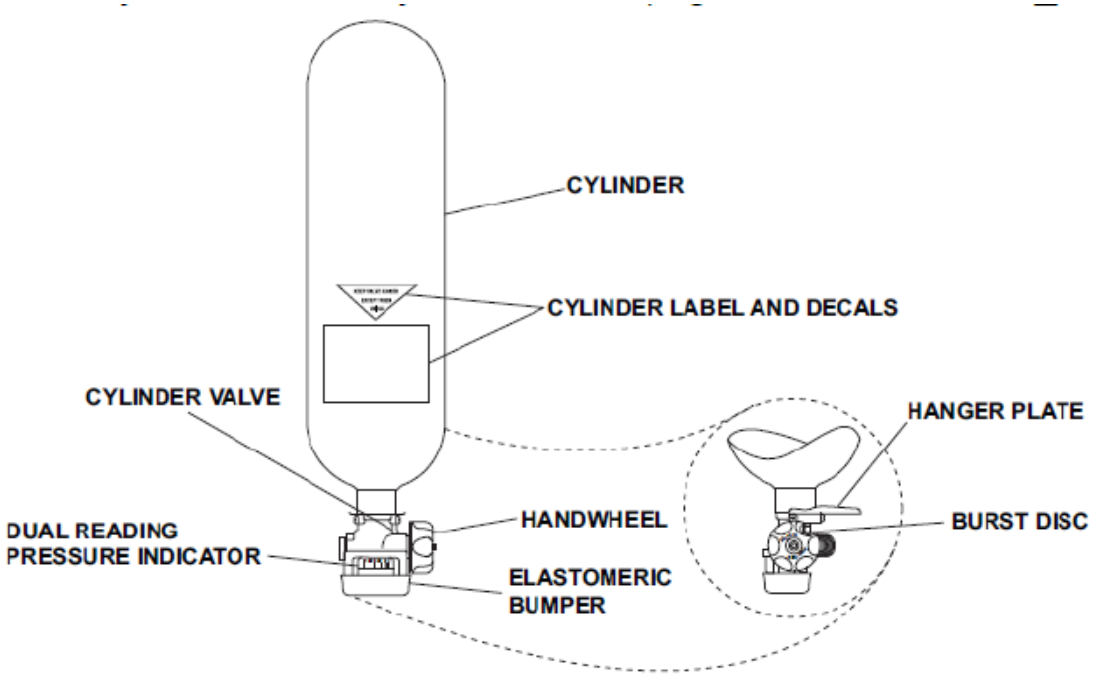



Figure 551-88L-2049_12
SCBA Cylinder Assembly

(3) Check the back frame and harness assembly, (refer to Figure 551-881-2049_13).

(a) Inspect the waist, side, and shoulder straps for cuts, rips, or tears.

(b) Inspect buckles, cylinder band clamp, and the over center latch mechanism for proper operation.

(c) Verify that the dust cap is on the quick disconnect fitting of the Rapid Intervention Crew/Universal Air Connection (RIC/UAC) and that it is not cracked, dry rotted, cut, or missing.

(d) The back frame and harness is not ready/available if:

_1_ The waist, side, or shoulder straps have cuts, rips, or tears that prevent the proper wearing of the back frame and harness assembly.

_2_ The buckles, cylinder band clamp, or the over center latch mechanism fail to operate properly.

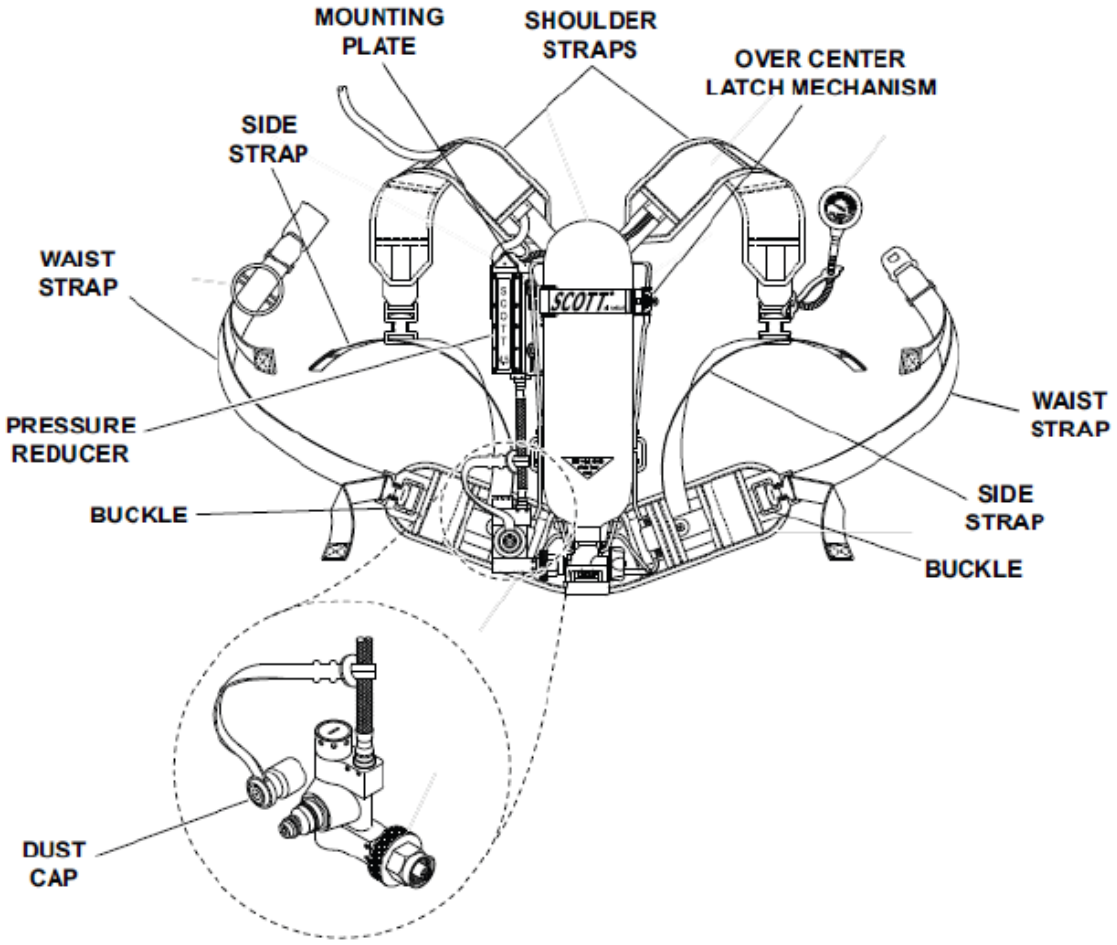



Figure 551-88L-2049_13
Back Frame and Harness Assembly

(4) Check the pressure reducer and Visualert, (refer to Figure 551-881-2049_14).

(a) Inspect the pressure reducer for corrosion and external damage.

(b) Verify that the remote high pressure hose, the low pressure hose, and the Rapid Intervention Crew/Universal Air Connection (RIC/UAC) high pressure hose are securely attached to the pressure reducer and that the hoses are not cut, broken or dry rotted.

(c) Verify that the Heads-Up Display (HUD) electrical cable is securely attached to the Visualert mounting block on the pressure reducer and that the heads up display electrical cable is not cut or frayed.

(d) The pressure reducer is not ready/available if:

_1_ The pressure reducer is corroded or has external damage.

_2_ The remote high pressure hose, the low pressure hose, or the Rapid Intervention Crew/Universal Air Connection (RIC/ UAC) high pressure hose is not securely attached to the pressure reducer; the hoses are cut, broken, or dry rotted.

_3_ The HUD electrical cable is not securely attached to the Visualert mounting block on the pressure reducer; or, the heads up display electrical cable is cut or frayed.

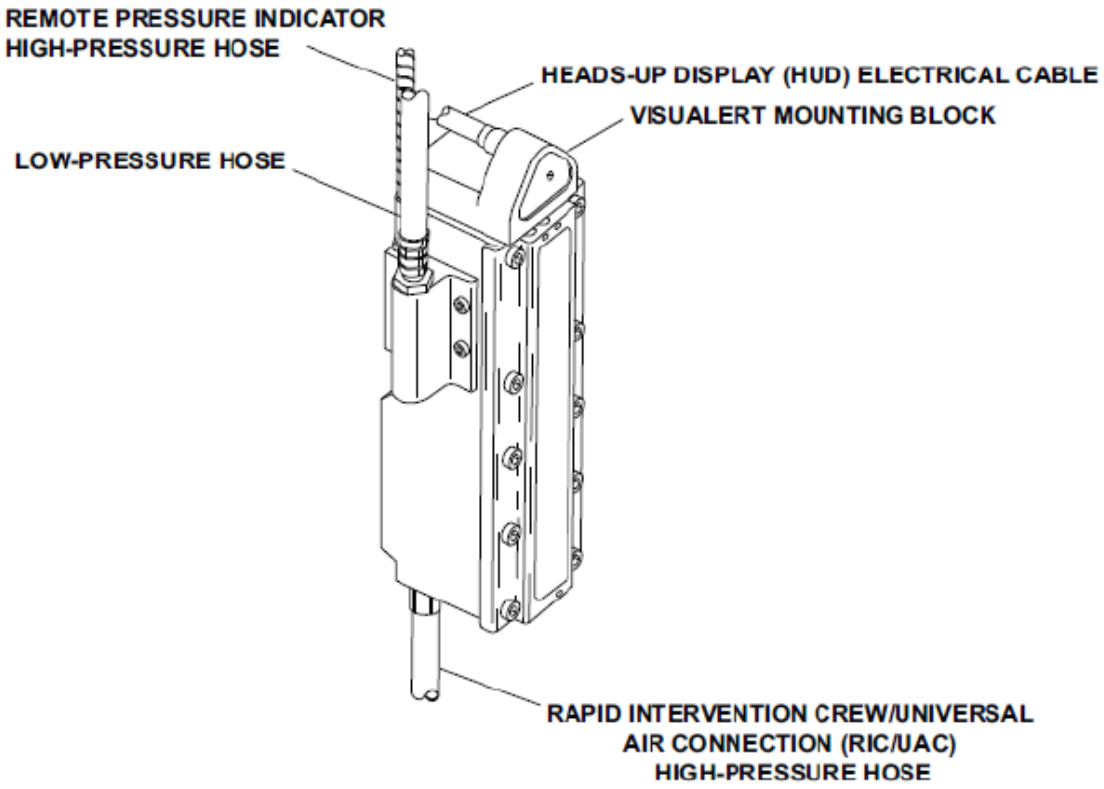



Figure 551-88L-2049_14
Pressure Reducer

(5) Check the facepiece, (Figure 551-88L-2049_15).

(a) Inspect the facepiece for rubber deterioration, dirt, cracks, holes, or tackiness.

(b) Inspect the six point head harness for cuts, tears, abrasions, and signs of heat or chemical damage.

(c) Inspect the temple and neck buckles for deformation, crushing, corrosion, and damaged or missing fasteners.

(d) Inspect the lens for cracks and loss of tightness with the facepiece rubber. Verify that the lens is not broken, cracked, or has scratches that would impair vision.

(e) Inspect the retaining ring for damage.

(f) Check that the inhalation valves are installed, the nosecup assembly is correctly positioned inside the faceseal chin cup, and that the nose cup is properly sealed between the flanges of the voicemitter ducts.

(g) Inspect the voice amplifier to verify that the batteries are present and that the voice amplifier turns on and off.

(h) The facepiece is not ready/available if:

_1_ The rubber on the facepiece is deteriorated, cracked, has holes or is tacky.

_2_ The six point head harness is cut, torn, has abrasions, or signs of heat and chemical damage.

_3_ The temple and neck buckles are deformed, crushed, corroded, or have damaged or missing fasteners.

_4_ The lens is broken, cracked, has scratches that impair vision, or loses tightness with the facepiece rubber.

_5_ The retaining ring is damaged. The inhalation valves are not installed.

_6_ The nosecup assembly is not correctly positioned inside the faceseal chin cup.

_7_ The nosecup assembly is not properly sealed between the flanges of the voicemitter ducts.

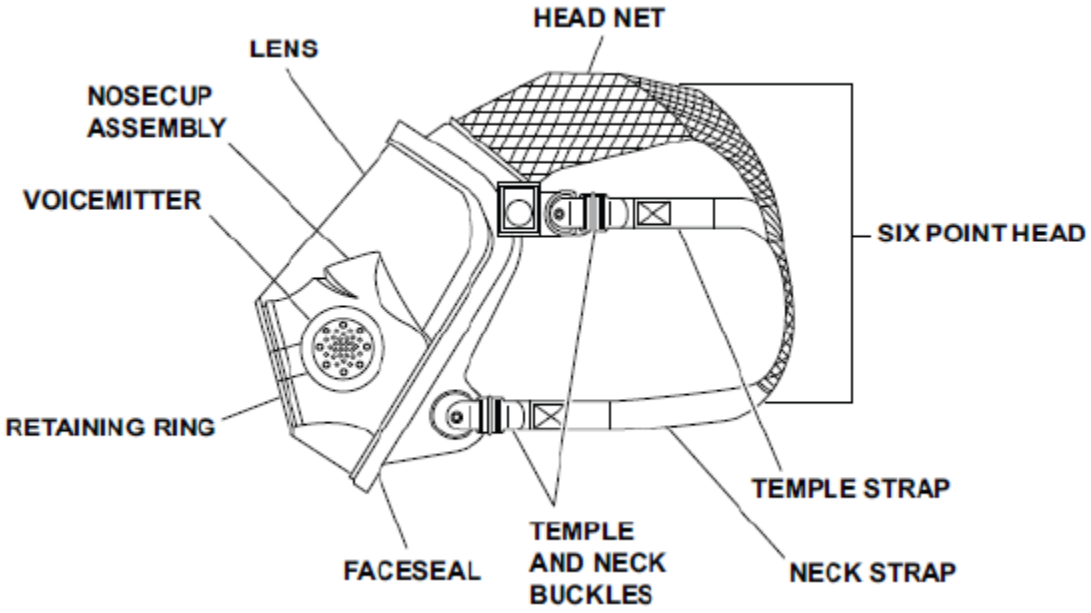



Figure 551-88L-2049_15
Facepiece

(6) Check the mask-mounted regulator, (refer to Figure 551-88L-2049_16).

(a) Inspect the mask-mounted regulator for external damage.

(b) Verify that the purge valve can be rotated and that it is not cracked or deformed.

(c) Verify that there is no damage to the latch mechanism.

(d) Verify that the mask-mounted regulator connects to the facepiece.

Note: If the SCBA will not be used immediately, turn the handwheel on the cylinder valve to the fully closed position. Operate the purge valve on the mask-mounted regulator to remove the air pressure from the SCBA.

(e) Turn the handwheel on the cylinder valve to the fully open position.

(f) Verify that the Heads-Up Display (HUD) has two rectangular green Light-Emitting Diodes (LED) illuminated indicating that the cylinder is full.

(g) Verify that the air saver switch is fully depressed and that air does not flow freely from the facepiece.

(h) Verify that the Vibralert is not activated.

(i) The mask-mounted regulator is not ready/available if:

_1_ The mask-mounted regulator is damaged.

_2_ The purge valve cannot be rotated.

_3_ The purge valve is cracked or deformed.

_4_ The latch mechanism is damaged. It fails to connect to the facepiece.

_5_ The HUD does not have two rectangular green LEDs illuminated indicating that the cylinder is full; the heads up display indicates a low battery with one round red LED illuminated.

_6_ The air saver switch cannot be fully depressed, preventing the free flow of air from the facepiece.

_7_ The Vibralert is activated.

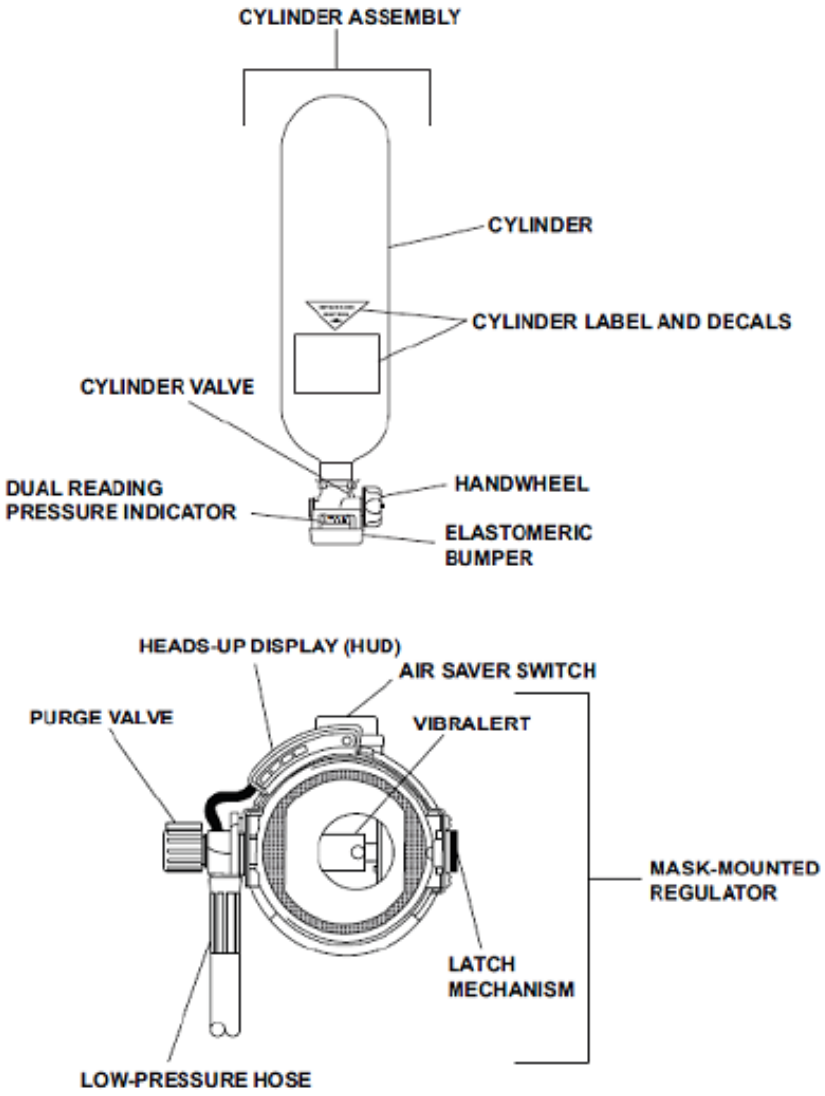



Figure 551-88L-2049_16
Cylinder Assembly and Heads-Up Display

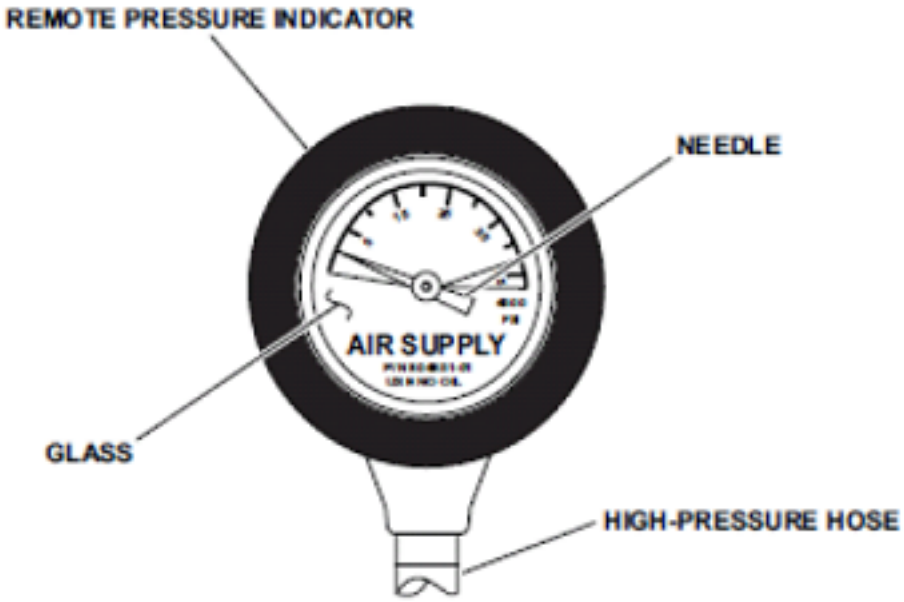



Figure 551-88L-2049_17
Remote Pressure Indicator

b. Perform during use checks.

(1) Check the remote pressure indicator during use to verify that air pressure is indicated on the remote pressure indicator, the remote pressure indicator is not ready/available if the remote pressure indicator fails to indicate air pressure, (refer to Figure 551-88L-2049_17).

(2) Check the mask-mounted regulator during use.

(a) Verify that there is a free flow of air once a face-to-mask seal has been established.

(b) Verify that the Heads-Up Display (HUD), (refer to Figure 551-88L-2049_18) indicates the amount of air in the cylinder with the following LEDs:

_1_ Two rectangular green LEDs indicate the cylinder air pressure is full to ¾ full.

_2_ One rectangular green LED indicates the cylinder air pressure is ¾ full to ½ full.

_3_ One rectangular yellow slowly flashing LED indicates the cylinder air pressure is ½ full to ¼ full.

_4_ One rectangular red rapidly flashing LED indicates the cylinder air pressure is ¼ full.

(c) The mask-mounted regulator is not ready/available if:

_1_ The mask mounted regulator fails to provide a free flow of air after a face- to-mask seal has been established.

_2_ The HUD fails to indicate the cylinder air pressure.

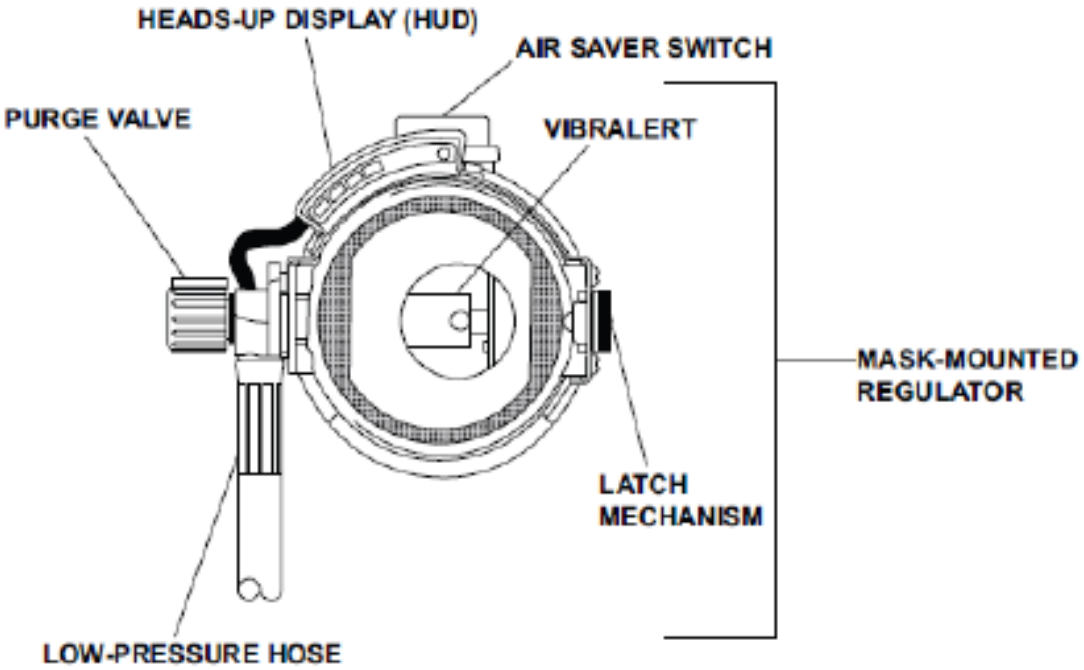



Figure 551-88L-2049_18
Heads-Up Display

c. Perform after use maintenance.

(1) Check the remote pressure indicator, (refer to Figure 551-88L-2049_17).

(a) Verify that the cylinder valve on the cylinder assembly is off.

(b) Purge any remaining air pressure shown on the remote pressure indicator with the purge valve on the mask mounted regulator.

(c) Verify that the glass on the remote pressure indicator is not cracked or broken.

(d) Verify that the needle is present and not bent.

(e) Verify that the high pressure hose is securely attached to the remote pressure indicator.

(f) The remote pressure indicator is not ready or available for use if:

_1_ The glass on the remote pressure indicator is cracked or broken.

_2_ The needle on the remote pressure indicator is missing or bent.

_3_ The high pressure hose is not securely attached to the remote pressure indicator.

(2) Check the cylinder assembly after use, (refer to Figure 551-88L-2049_16).

(a) Inspect cylinder label and decals to ensure that all information is legible and that the cylinder is within the hydrostatic test date.

(b) Inspect the cylinder assembly exterior surface for cuts, gouges, abrasions, dents, corrosion, and discoloring, or damage that has caused the fiber overwrap to display exposed, broken, or loose fibers or has become separated, unraveled, or loose.

(c) Inspect the cylinder valve for external damage, thread damage, and proper handwheel operation.

(d) Verify that the elastomeric bumper is present and not cracked or broken.

(e) Inspect the burst disc to ensure that it is not ruptured.

(f) Inspect the hanger plate to ensure it is not bent or broken. Ensure it is firmly secured with the locking tab and that the cylinder band clamp is tightened to properly secure the installed cylinder.

(g) Charge the cylinder.

(h) The cylinder assembly is not ready/available if:

_1_ The cylinder label and decals are not legible or the cylinder is not within the hydrostatic test date.

_2_ The cylinder assembly exterior surface has level 2 or level 3 damage (as defined in Appendix C of TM 10-4310-503-13&P).

_3_ The cylinder valve has damaged threads that prevent proper handwheel operation.

_4_ The elastomeric bumper is missing, cracked, or broken.

_5_ The burst disc is ruptured.

_6_ The hanger plate is bent or broken.

_7_ The cylinder fails to charge or will not hold a charge.

(3) Check the back frame and harness assembly after use, (refer to Figure 551-88L-2049_15).

(a) Inspect the facepiece for rubber deterioration, dirt, cracks, holes, or tackiness.

(b) Inspect the six point head harness for cuts, tears, abrasions, and signs of heat or chemical damage.

(c) Inspect the temple and neck buckles for deformation, crushing, corrosion, and damaged or missing fasteners.

(d) Inspect the lens for cracks and loss of tightness with the facepiece rubber. Verify that the lens is not broken, cracked, or has scratches that would impair vision.

(e) Inspect the retaining ring for damage.

(f) Check the following:

_1_ The inhalation valves are installed.

_2_ The nosecup assembly is correctly positioned inside the faceseal chin cup.

_3_ The nosecup assembly is properly sealed between the flanges of the voicemitter ducts.

(g) The facepiece is not ready/available if:

_1_ The rubber on the facepiece is deteriorated, cracked, has holes or is tacky.

_2_ The six point head harness is cut, torn, has abrasions, or signs of heat and chemical damage.

_3_ The temple and neck buckles are deformed, crushed, corroded, or have damaged or missing fasteners.

_4_ The lens is broken, cracked, has scratches that impair vision, or loses tightness with the facepiece rubber.

_5_ The retaining ring is damaged.

_6_ The inhalation valves are not installed.

_7_ The nosecup assembly is not correctly positioned inside the faceseal chin cup.

_8_ The nosecup assembly is not properly sealed between the flanges of the voicemitter ducts.

(4) Check the mask-mounted regulator after use, (refer to Figure 551-88L-2049_16).

(a) Inspect the mask-mounted regulator for external damage.

(b) Verify that the purge valve can be rotated and that it is not cracked or deformed.

(c) Verify that there is no damage to the latch mechanism.

(d) Verify that the mask-mounted regulator connects to the facepiece.

(e) Verify that the air saver switch is not cracked or deformed and that it does not bind when pressed.

(f) The mask-mounted regulator is not ready/available if:

_1_ The mask-mounted regulator is damaged.

_2_ The purge valve cannot be rotated, is cracked, or deformed.

_3_ The latch mechanism is damaged.

_4_ The mask-mounted regulator fails to connect to the facepiece.

_5_ The air saver switch is cracked, deformed, or binds when pressed.

(5) Check the pressure reducer and Visualert after use, (refer to Figure 551-88L-2049_14).

(a) Inspect the pressure reducer for corrosion and external damage.

(b) Verify that the remote high-pressure hose, the low-pressure hose, and the Rapid Intervention Crew/Universal Air Connection (RIC/UAC) high-pressure hose are securely attached to the pressure reducer and that the hoses are not cut, broken, or dry rotted.

(c) Verify that the Heads-Up Display (HUD) electrical cable is securely attached to the Visualert mounting block on the pressure reducer and that the heads up display electrical cable is not cut or frayed.

(d) The pressure reducer and Visualert is not ready/available if:

_1_ The pressure reducer is corroded or has external damage.

_2_ The remote highpressure hose, the low-pressure hose, or the Rapid Intervention Crew/Universal Air Connection (RIC/UAC) high-pressure hose is not securely attached to the pressure reducer; the hoses are cut, broken, or dry rotted.

_3_ The HUD electrical cable is not securely attached to the Visualert mounting block on the pressure reducer; or, the heads up display electrical cable is cut or frayed.

d. Perform cleaning of the SCBA.

Note: To clean the facepiece, the crewmembers performing the task will need three buckets, each containing approximately 1½ gallons of warm freshwater. The water temperature shall not exceed 110°F. In one of the buckets, mix one tablespoon of Wescodyne-G or one tablespoon of sodium hypochlorite with the 1½ gallons of freshwater. This will be used as the sanitizing solution. The remaining two buckets of freshwater will be used for rinsing the facepiece. The sanitizing solution should be changed after cleaning 25 facepieces.

(1) Clean the facepiece after use.

(a) Remove the mask-mounted regulator from the facepiece.

(b) Remove the voice amplifier from the facepiece.

(c) Completely immerse the facepiece, including the nosecup assembly and six point head harness in the sanitizing solution.

(d) Thoroughly wash the facepiece with a sponge.

(e) Agitate the facepiece in the sanitizing solution for at least 15 seconds to sanitize all parts.

(f) Keep the facepiece in the sanitizing solution for at least two minutes to allow the sanitizing solution to stay in contact with all parts of the facepiece.

(g) Remove the facepiece from the sanitizing solution and shake lightly to remove any of the sanitizing solution trapped in the facepiece.

(h) Completely immerse the facepiece in the first bucket of rinse water and agitate the facepiece for at least 15 seconds to thoroughly rinse off any sanitizing solution.

(i) Remove the facepiece from the first bucket of rinse water and shake lightly to remove any water trapped in the facepiece.

(j) Completely immerse the facepiece in the second bucket of rinse water and agitate the facepiece for at least 15 seconds to thoroughly rinse off any remaining sanitizing solution.

(k) Completely immerse the facepiece in the second bucket of rinse water and agitate the facepiece for at least 15 seconds to thoroughly rinse off any remaining sanitizing solution.

## CAUTION

DO NOT PLACE THE FACEPIECE NEAR A HEATER, A HEAT SOURCE, OR IN DIRECT SUNLIGHT TO DRY. THE RUBBER PIECES OF THE FACEPIECE MAY BE DAMAGED. FAILURE TO COMPLY WITH THIS CAUTION MAY RESULT IN DAMAGE TO THE EQUIPMENT.

(l) Wipe the facepiece dry with a lint free rag and/or allow the facepiece to air dry. Do not dry the facepiece near a heater or in direct sunlight.

(m) Wipe the voice amplifier with a rag dampened with the sanitizing solution.

(n) Install the voice amplifier on the facepiece.

(2) Clean the mask-mounted regulator after use, (refer to Figure 551-88L-2049_16).

Note: To clean the mask-mounted regulator, the crewmembers performing the task will need three buckets, each containing approximately 1½ gallons of warm freshwater. The water temperature shall not exceed 110°F. In one of the buckets, mix one tablespoon of Wescodyne-G or one tablespoon of sodium hypochlorite with the 1½ gallons of freshwater. This will be used as the sanitizing solution. The remaining two buckets of freshwater will be used for rinsing the mask mounted regulator. The sanitizing solution should be changed after cleaning 25 mask mounted regulators.

(a) Completely immerse the mask-mounted regulator and part of the low pressure hose in the sanitizing solution.

(b) Wash the mask-mounted regulator with a sponge. Agitate the mask-mounted regulator in the sanitizing solution for at least 15 seconds to sanitize all parts.

(c) Keep the mask-mounted regulator in the sanitizing solution for at least two minutes to allow the sanitizing solution to stay in contact with all parts of the mask-mounted regulator.

(d) Remove the mask-mounted regulator from the sanitizing solution and shake lightly to remove any of the sanitizing solution trapped in the mask-mounted regulator.

(e) Completely immerse the mask-mounted regulator in the first bucket of rinse water and agitate the mask-mounted regulator for at least 15 seconds to thoroughly rinse off any sanitizing solution.

(f) Remove the mask-mounted regulator from the first bucket of rinse water and shake lightly to remove any water trapped in the mask-mounted regulator.

(g) Completely immerse the mask-mounted regulator in the second bucket of rinse water and agitate the mask-mounted regulator for at least 15 seconds to thoroughly rinse off any remaining sanitizing solution.

(h) Remove the mask-mounted regulator from the second bucket of rinse water and shake lightly to remove any water trapped in the mask-mounted regulator.

## CAUTION

DO NOT PLACE THE MASK-MOUNTED REGULATOR NEAR A HEATER, A HEAT SOURCE, OR IN DIRECT SUNLIGHT TO DRY. THE MASK-MOUNTED REGULATOR MAY BE DAMAGED. FAILURE TO COMPLY WITH THIS CAUTION MAY RESULT IN DAMAGE TO THE EQUIPMENT.

(i) Wipe the mask-mounted regulator dry with a lint free rag and/or allow the maskmounted regulator to air dry. Do not dry the mask-mounted regulator with a heater or in direct sunlight.

(j) When the mask-mounted regulator is dry, stow it in the back frame and harness assembly protective holder.

(3) Clean the back frame and harness assembly after use, with a sponge dampened in the sanitizing solution used to clean the facepiece and mask-mounted regulator.

(4) Clean the cylinder assembly weekly.

(a) Turn the handwheel on the cylinder valve to the fully OPEN position.

(b) Verify that the remote pressure indicator displays a minimum of 4000 PSI.

(c) Verify that the dual reading pressure indicator on the cylinder assembly displays a minimum of 4000 PSI.

(d) Turn the handwheel on the cylinder valve to the fully closed position.

(e) Operate the purge valve on the mask-mounted regulator to remove the air pressure from the SCBA.

(f) The cylinder assembly is not ready/available if:

_1_ The handwheel on the cylinder valve will not turn to the fully open position.

_2_ The pressure indicator displays less than 4000 PSI.

_3_ The air cylinder pressure is less than 4000 PSI on the dual reading pressure indicator.

_4_ The handwheel on the cylinder valve will not turn to the fully closed position.

_5_ (The purge valve fails to remove the air pressure from the SCBA.

e. Test SCBA equipment.

(1) Test the SCBA monthly for air leaks.

(a) Verify that the purge valve on the mask-mounted regulator is closed.

(b) Turn the handwheel on the cylinder valve to the fully open position then back off 1/4 turn.

(c) Verify that all LEDs on the Heads-Up Display (HUD) illuminate and initialize for 20 seconds (after the cylinder valve is in the open position).

(d) Wait 30 seconds and verify that the remote pressure indicator and the dual reading pressure indicator display a pressure of at least 4000 PSI and are within 500 PSI of each other.

(e) Turn handwheel on the cylinder valve to the fully closed position.

(f) Record the pressure displayed on the remote pressure indicator and wait for one minute. After one minute has passed, record the pressure on the remote pressure indicator. If the pressure change is more than 500 PSI, perform the procedure again from step a until a pressure change of less than 500 PSI is observed or the test has been performed a total of three times.

(g) The equipment is not ready/available if:

_1_ The LEDs on the HUD fail to illuminate.

_2_ The remote pressure indicator or the dual reading indicator displays a pressure of less than 4000 PSI. The pressure difference between the remote pressure indicator and the dual reading pressure indicator is greater than 500 PSI.

(h) Annotate test results on the daily page and in the inspection section of the vessel logbook.

(2) Test the SCBA end-of-service alarms monthly.

(a) Test SCBA for air leaks.

(b) Verify that the remote pressure indicator displays at least 4000 PSI.

(c) Position the remote pressure indicator so that it can be observed while observing the Heads-Up Display (HUD) on the mask-mounted regulator.

(d) Slightly open the purge valve on the mask mounted regulator to allow the air pressure in the cylinder to decrease.

(e) Verify that the Light-Emitting Diodes (LED) on the HUD illuminate as indicated Table 2 as the air pressure in the cylinder decreases.

| Cylinder Pressure Transition | HUD Indicator | Pressure Reading on Remote Pressure Indicator PSI |
|---|---|---|
| Full to Three quarter | Two green LEDs to One green LED | 3200-3700 |
| Three quarter to One-half | One green LED to One slow flashing yellow LED | 2000-2500 |
| One-half to One-quarter | One slow flashing yellow LED to One rapidly flashing red LED | 800-1300 |

Table 2
Pressure at HUD Indication Changes

(f) Verify that the Vibralert activates when the air pressure in the cylinder is between 800 PSI and 1300 PSI.

(g) Allow the remaining air pressure in the cylinder to vent and then CLOSE the purge valve.

(h) Charge the cylinder.

(i) The SCBA is not ready/available if:

_1_ The LEDs on the HUD fail to illuminate as indicated in Figure 551-8ST-1004_11.

_2_ The Vibralert fails to activate between 800 PSI and 1300 PSI.

(3) Test the SCBA for proper operation monthly.

(a) Perform all Before Preventive Maintenance Checks and Services.

(b) Test the SCBA for air leaks.

(c) Test the SCBA end of service alarms.

(d) Place the back frame and harness assembly with the cylinder assembly installed on a crewmember.

Note: The facepiece may not seal properly if the crewmember has a beard, gross sideburns, or similar facial characteristics. The crewmember can breathe normally with the facepiece on as long as the mask-mounted regulator is not installed.

(e) Don the facepiece and tighten the six point head harness to obtain a proper face seal.

(f) Verify that the purge valve on the mask-mounted regulator is in the fully closed position and install the mask-mounted regulator in the facepiece.

(g) Inhale until the facepiece is drawn against the face and then hold their breath for 10 seconds. A leak-free facepiece will be drawn toward the face and remain in that position as long as negative pressure is maintained. If the facepiece does not seal, remove the mask-mounted regulator, adjust the six point head harness, and perform steps 8.e.3.e&f.

(h) Turn the handwheel on the air cylinder valve to the fully open position.

(i) Inhale sharply to start the air flow into the facepiece.

(j) Breathe normally (inhale through the nose and exhale through the mouth). Exhaled air should exit the facepiece through the exhalation valve in the mask-mounted regulator. Air should not exit via the facepiece face seal.

(k) Set the voice amplifier to on.

(l) Speak into the facepiece.

(m) Verify that the crewmember's voice can be heard clearly.

(n) If the crewmember's amplified voice output is low or distorted, replace the amplifier battery.

(o) Set the voice amplifier to off.

(p) Open the purge valve on the mask-mounted regulator.

(q) Verify that air rushes into the facepiece.

(r) Close the purge valve on the mask-mounted regulator.

(s) Verify that the rush of air into the facepiece has stopped.

(t) Insert two fingers between face seal of the facepiece and their face and slowly lift the facepiece away from their face.

(u) Verify that air flows outward from the opening between the face and the facepiece.

(v) Press the air saver switch.

(w) Verify that the flow of air has stopped.

(x) Remove the mask-mounted regulator from the facepiece and stow it in its protective holder.

(y) Remove the facepiece and the back frame and harness assembly.

(z) Perform all after maintenance.

(aa) The SCBA is not ready/available if:

_1_ Facepiece fails to seal properly.

_2_ The purge valve on the mask-mounted regulator fails to operate properly.

_3_ The air saver switch fails to operate properly.

(Asterisks indicates a leader performance step.)

**Evaluation Guidance:** None

**Evaluation Preparation:** None

| PERFORMANCE MEASURES | GO | NO-GO | N/A |
|---|---|---|---|
| 1. Performed preventive maintenance of the Fire Stations. | | | |
| a. Ensured all equipment is in place. | | | |
| b. Inspected Y-gate and plug valve. | | | |
| c. Inspected fire fighting nozzle. | | | |
| d. Inspected and lubricate in-line proportioner. | | | |
| e. Inspected, lubricated and re-racked fire hose. | | | |
| 2. Performed annual pressure test of the Fire Hoses. | | | |
| a. Inspected fire hoses. | | | |
| b. Tested fire hoses. | | | |
| 3. Performed functional flow test of all Fire Monitors. | | | |
| 4. Performed preventive maintenance on CO2 Fire Extinguishers. | | | |
| a. Performed monthly maintenance. | | | |
| b. Performed semi-annual maintenance. | | | |
| c. Performed as required maintenance. | | | |
| 5. Performed preventive maintenance on PKP Extinguishers. | | | |
| a. Performed quarterly maintenance. | | | |
| b. Performed annual maintenance. | | | |
| 6. Performed preventive maintenance on AFFF Fire Extinguishers. | | | |
| a. Performed monthly maintenance. | | | |
| b. Performed semi-annual maintenance. | | | |
| c. Performed as required maintenance. | | | |
| 7. Performed preventive maintenance of the FFE. | | | |
| a. Performed annual maintenance. | | | |
| b. Performed as required maintenance. | | | |
| 8. Performed preventive maintenance on SCBA. | | | |
| a. Performed monthly maintenance. | | | |
| b. Performed during use checks. | | | |
| c. Performed after use maintenance. | | | |
| d. Performed cleaning of the SCBA. | | | |
| e. Tested SCBA equipment. | | | |

**Supporting Reference(s):**

| Step Number | Reference ID | Reference Name | Required | Primary |
|---|---|---|---|---|
| | STP 5-21M1-SM | Soldier's Manual, MOS 21M, Firefighter, Skill Level 1 | No | No |
| | STP 5-21M24-SM-TG | Soldier's Manual and Trainer's Guide, MOS 21M, Firefighter, Skill Levels 234 | No | No |
| | TM 55-1905-217-12 | Operator’s and Organizational Maintenance Manual: Landing Craft, Mechanized, Steel, DED, Overall Length 74 Feet, Mod 1, Mark VIII, Navy Design LCM-8, Hull Nos. 8500-8560 and 8580-8618 (NSN 1905-00-935-6057) (Reprinted W/Basic Incl C1-3) | No | No |
| | TM 55-1905-223-10 | Operator’s Manual for Landing Craft, Utility (LCU 2000 CLASS) (NSN 1905-01-154-1191) (Reprinted W/Basic Incl C1-9) (This item is included on EM 0273) | No | No |
| | TM 55-1905-223-SDC | SHIPBOARD DAMAGE CONTROL MANUAL FOR LANDING CRAFT UTILITY (LUC) (NSN 1905-01-154-1191) | No | No |
| | TM 55-1915-200-10 | Operator’s Manual for Logistic Support Vessel (LSV) (NSN 1915-01-153-8801) (Reprinted W/Basic Incl C1-6) | No | No |
| | TM 55-1915-200-SDC | SHIPBOARD DAMAGE CONTROL MANUAL FOR LOGISTIC SUPPORT VESSEL (LSV) (NSN 1915-01-153-8801) | No | No |
| | TM 55-1915-254-10-1 | OPERATOR'S MANUAL FOR LOGISTICS SUPPORT VESSEL (LSV-7 & -8) | No | No |
| | TM 55-1915-254-10-2 | OPERATOR'S MANUAL FOR LOGISTICS SUPPORT VESSEL (LSV-7 & -8) | No | No |
| | TM 55-1925-204-12 | OPERATORS AND ORGANIZATIONAL MAINTENANCE MANUAL FOR TUG, HARBOR, DIESEL, STEEL, 1,200 HP, 100 FOOT DESIGN 3006, FLIGHT ONE (NSN 1925-00-375-3003) (REPRINTED W/BASIC INCL C1-5) | No | No |
| | TM 55-1925-236-12 | OPERATOR AND UNIT MAINTENANCE MANUAL FOR SMALL TUG (ST) (NSN 1925-01-435-1713) | No | No |
| | TM 55-1925-254-14&P | OPERATOR, UNIT, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL | No | No |
| | TM 55-1925-273-10-1 | Operator’s Manual For Inland Coastal Large Tug (LT) (NSN 1925-01-509-7013)(EIC XAG) (This item is included on EM 0272) | No | No |
| | TM 55-1925-273-10-2 | Operator’s Manual for Inland and Coastal Large Tug (LT) (NSN 1925-01-509-7013) (EIC XAG) (This item is included on EM 0272) | No | No |
| | TM 55-1925-273-SDC | SHIPBOARD DAMAGE CONTROL MANUAL FOR INLAND AND COASTAL LARGE TUG (LT) | No | No |

**Environment:** Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful

effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination.

**Prerequisite Individual Tasks :** None

**Supporting Individual Tasks :**

| Task Number | Title | Proponent | Status |
|---|---|---|---|
| 551-88L-3054 | Troubleshoot Fire Fighting Equipment | 551 - Transportation (Individual) | Approved |

**Supported Individual Tasks :**

| Task Number | Title | Proponent | Status |
|---|---|---|---|
| 551-88L-3054 | Troubleshoot Fire Fighting Equipment | 551 - Transportation (Individual) | Approved |

**Supported Collective Tasks :** None

**ICTL Data :**

| ICTL Title | Personnel Type | MOS Data |
|---|---|---|
| 88L20 Watercraft Engineer | Enlisted | MOS: 88L, Skill Level: SL2, Duty Pos: TFS, LIC: EN |
| 88L30 Watercraft Engineer | Enlisted | MOS: 88L, Skill Level: SL3, Duty Pos: TFR, LIC: EN |
| 88L40 Watercraft Engineer | Enlisted | MOS: 88L, Skill Level: SL4, Duty Pos: TGB, LIC: EN, SQI: O |